

REMARKS

In response to the Final Office Action mailed 22 May 2002, the application has been carefully reviewed and amended. As the present amendment does not change the scope of the claims, and addresses the outstanding rejections under 35 U.S.C. §112, applicant respectfully requests entry of the amendment, and reconsideration of the application.

Rejections Under 35 U.S.C. §112

Claims 1-20, 23-24, 26 and 33-65 stand rejected under 35 U.S.C. §112, first paragraph. Examiner Uhler has asserted the previously amended claims which generally recite a "powder coating" or a "heat fusible" powder coating on a portion of the metal reinforcing member and the resilient polymeric body are not supported by the original claims or specification. (Paper 10, Page 2)

Further, newly added claims 46, 52, 58 and 63 are rejected under 35 U.S.C. §112 as neither the original specification or original claims disclose that one of the trim portion or sealing portion can have a lower density than the remaining portion. (Paper 10, Page 3)

"Heat Fusible Powder Coating"

The examiner's attention is directed to the following portions of the original specification:

"In contrast to prior applications of powder coatings, the present invention contemplates applying the powder coating to, and forming the surface film on a resilient or flexible substrate such as an elastomeric or polymeric weatherseal." (Page 3, Lines 5-8)

"The surface film 60 is a powder coating applied to the body 20 and subsequently melted to form a contiguous and preferably continuous surface layer." (Page 7, Lines 13-15)

"Conversely, a first powder coating can be applied to the weatherseal and colliquefied, whereupon a second powder coating can be applied to a second portion of the weatherseal and then colliquefied." (Page 7, Line 35 - Page 8, Line 3)

"It is also understood, different powder coatings can be applied to different areas of the body, such that the powder coatings are subsequently and simultaneously melted." (Page 8, Lines 4-7)

"Powder coatings are applied as a dry material and when powder coating is heated, the particles colliquify (melt) to form a contiguous film, which is typically very durable and chemical resistant." (Page 8, Line 34 - Page 9, Line 2)

"Thermoset powder coatings are applied and then cured, typically in an oven at a certain temperature for a certain time period. The cure process will cause a chemical cross linking to take place, changing the powder into a contiguous film that will not re-melt." (Page 9, Lines 6-9)

"The powders [sic - powder] coatings can be formulated to meet a variety of appearance or performance characteristics, including the surface film thickness, gloss, texture, color, and performance (hardness, chemical resistance, UV resistance, temperature resistance.) The powder coatings can be selected to provide very smooth finishes, hammertones, wrinkles and metallics." (Page 9, Lines 10-15)

"The particle size of the powder coating can be controlled in response to the desired performance and appearance of the resulting surface film 60." (Page 9, Lines 16-18)

"A thermoset powder coating for the surface film 60 can include a resin particle containing a thermosetting resin, and a particle containing a carrying agent." (Page 9, Lines 19-21)

"The surface film 60 is the colliquiefaction of a powder coating, wherein the powder coating is temporarily retained on the weatherseal 10 and subsequently melted in placed to form a contiguous surface." (Page 10, Lines 30-33)

"The powder coating can be temporarily disposed on the weatherseal 10 by a variety of mechanisms including bonding agents and electrostatic attraction." (Page 10, Lines 33-35)

"The bonding agents can be incorporated into the powder coating, or applied to the weatherseal in the desired location for the surface film 60 prior to exposure of the body 20 to the powder coating." (Page 11, Lines 1-4)

"Alternatively, and preferably, a surface charge is formed on selected portions of the body 20 and the powder coating particles are oppositely charged, such that upon exposure of the oppositely charged particles to the surface charged portions to [sic - of] the body, the powder coating is temporarily adhered." (Page 11, Lines 5-9)

"It has been found that a sufficient potential can be applied to the reinforcing member 32 to create a charge at the surface of the body 20 that is sufficiently

strong to retain the powder coating prior to colliqufaction.” (Page 11, Lines 21-24)

“By controlling the electrical potential difference between the powder coating and the surface charge in the body 20, the amount of powder coating retained in the body can be controlled.” (Page 11, Lines 25-27)

“As the amount of retained powder coating on the body 20 at least partially determines the thickness of the colliquified surface film 60, the thickness of the surface film can be controlled by the electrical potential used to retain the powder coating on the body 20.” (Page 11, Lines 28-32)

“Subsequently, the adhered powder coating is melted by a variety of options including radiative heat, conductive heat, radiation as well as solvents.” (Page 11, Lines 33-35)

“Upon applying the powder coating by means of a spray, any overspray of the powder coating can be collected and re-exposed to subsequent sections of the weatherseal.” (Page 12, Lines 10-12)

“The use of an [sic - a] powder coating and subsequent colliqufaction and bonding to the body 20 allows the body to be formed pursuant to optimal conditions for the material of the body, without having to account for the processing considerations of the surface film. The powder coating can be subsequently applied to the body and melted to form the desired surface film 60, through either an on-line or off-line process.” (Page 12, Lines 19-25)

“After forming the body 20, the powder coating can be applied and melted pursuant to a different and optimized set of parameters.” (Page 12, Lines 31-33)

Therefore, applicant respectfully submits the specification as written supports “a heat fusible powder coating” (Claims 1-4, 33 and 34); “a powder coating” (Claims 5-9); “a powder coating” (Claims 10-19); “a heat fusible powder coating” (Claims 20, 23, 24 and 25); “a heat fusible powder coating” (Claims 35-39); “a powder coating” (Claims 40-41); a heat fusible powder coating” (Claims 42-49); “a powder coating” (Claims 50-55); “a heat fusible thermosetting powder coating” (Claims 56-59); and “a thermosetting powder coating” (Claims 61-65)

Therefore, applicant respectfully submits the original specification supports a powder coating on the surface of a reinforcing member or polymeric material, prior to being fused or melted.

Lower Density Limitation

Claims 46, 52, 58 and 63 stand rejected under 35 U.S.C. §112, for recitation of “lower density.” These claims have been amended to remove the “lower density” language and recite “one of the trim portion and the sealing portion has one of a foamed, cellular and sponge structure.”

Support for this limitation is found in “The sealing portion 40 can be constructed from a variety of materials, including but not limited to TPEs, thermoplastics and thermosets, wherein the materials can be solid, foamed, cellular or a sponge construction.” (Page 6, Lines 21-24)

Therefore, applicant submits Claims 46, 52, 58 and 63 comply with 35 U.S.C. §112, and are in condition for allowance.

Rejections Under 35 U.S.C. §102/103

Claims 1-7, 9-10, 12-14, 16-20, 23-24, 26 and 33-65 stand rejected under 35 U.S.C. §102 as being anticipated by or in the alternative under 35 U.S.C. §103 as being obvious over Ford (U.S. Patent No. 5,545,448) as evidenced by Cook (U.S. Patent No. 6,024,906). (Paper 10, Page 4, Paragraph 5)

For the purpose of the examination, the examiner interpreted the terms “powder coating” and “heat fusible powder coating” to mean a powder coating which is melted to form a contiguous and preferably continuous layer.” (Paper 10, Page 4, Paragraph 6)

As set forth in the analysis of the rejections under 35 U.S.C. §112, Applicant respectfully submits the specification supports the recited powder coating or heat fusible powder coating prior to fusing or melting and is thus not a product by process claim.

With respect to the cited references, Ford discloses a two-component spray coating, wherein one “component is a mixture of a branched hydroxyl bearing polyester and a hydroxyl bearing polyacrylate dissolved in aromatic hydrocarbon and aliphatic ester solvents in which coloring pigments and fluorocarbons polymers are suspended.” (Col. 3, lines 14-19) This component “is then blended in an exact proportion to allow

precise reaction stoichiometry with the cross linking component, this being a solution of two aliphatic polyisocyanates in aromatic hydrocarbon and aliphatic ester solvents in which the fluorocarbon polymer is suspended.” (Col. 3, lines 21-25)

The spray coating consists of a two component material. One component is a mixture of a branched hydroxyl-bearing polyester and a hydroxyl-bearing polyacrylate dissolved in aromatic hydrocarbon and aliphatic ester solvents, in which colouring pigments and fluorocarbon polymers are suspended.

The above component is then blended in an exact proportion to allow precise reaction stoichiometry with the cross linking component, this being a solution of two aliphatic polyisocyanates in aromatic hydrocarbon and aliphatic ester solvents in which fluorocarbon polymer is suspended. (Col. 3)

Applicant respectfully submits this does not disclose the recited powder coating or heat fusible powder coating.

Similarly, the disclosure of Cook in a thermoplastic elastomer reinforcement strip 25 is *extruded* onto a main part 27 of the securing portion 23 (Col. 6, Lines 28-30) does not disclose or suggest the recited powder coating. In addition, Cook recites:

Immediately after the thermoplastics material 25 has been extruded onto the face of the base 55 and while both materials are still hot, the arms 57 and 59 of thermosetting material are folded inwardly in the direction of the arrows A as shown in FIG. 5A until the inner faces of each arm abut the outer face of the thermoplastic material 25 and the free end portions of the arms 57 and 59 abut each other. Because the materials are still hot they will bond with each other. (Col. 7)

This does not disclose or suggest a powder coating (or a heat fusible powder coating) on a portion of the weatherseal. Therefore, applicant respectfully submits Claims 1-7, 9-10, 12-14, 16-20, 23-24, 26 and 33-65 are in condition for allowance.

Rejections Under 35 U.S.C. §103

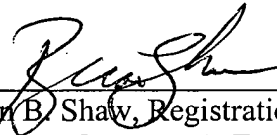
Claims 1, 3, 5, 8, 10 and 15 stand rejected under 35 U.S.C. §103 as being unpatentable over Ford as evidenced by Cook (U.S. Patent No. 6,024,906) in view a Chihara, et al. (U.S. Patent No. 5,115,007). (Paper 10, Page 7, Paragraph 13)

The examiner has interpreted the terms "powder coating" and "heat fusible powder coating" to mean a powder coating which is melted to form a contiguous and preferably continuous layer." (Paper 10, Page 7, Paragraph 14)

The recited powder coating and heat fusible powder coating is not properly interpreted to mean a powder coating which is melted to form a contiguous and preferably continuous layer. Therefore, applicant respectfully submits this rejection has been overcome, and Claims 1, 3, 5, 8, 10 and 15 are in condition for allowance.

Applicant respectfully submits all the pending claims, Claims 1-20, 23, 24, 26 and 33-65 are in condition for allowance and such action is earnestly solicited. If, however, the examiner feels that any further issues remain he is cordially invited to contact the undersigned so that any such matters may be promptly resolved.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. An automotive weatherseal, comprising:
 - (a) a resilient polymeric body;
 - (b) a metal reinforcing member connected to the body; and
 - (c) a heat fusible powder coating on a portion of the metal reinforcing member and the resilient polymeric body.
2. The automotive weatherseal of Claim 1, wherein the resilient polymeric body includes a trim portion and a sealing portion.
3. The automotive weatherseal of Claim 1, further comprising a quantity of powder coating to form a surface film of fused powder coating having a thickness less than 0.2 mm.
4. The automotive weatherseal of Claim 1, wherein the metal reinforcing member is partially covered by the polymeric body.
5. An automotive weatherseal, comprising:
 - (a) a substrate having a first portion formed of a first polymeric material and a second portion formed of a different second polymeric material; and
 - (b) a powder coating on the first portion and the second portion.
6. The automotive weatherseal of Claim 5, wherein the first polymeric material is a thermoset material and the second polymeric material is a thermoplastic material.
7. The automotive weatherseal of Claim 5, further comprising a metallic reinforcing member connected to one of the first portion or the second portion.
8. The automotive weatherseal of Claim 5, wherein a colliquescence of the powder coating has a thickness between 0.05 mm and 0.2 mm.
9. The automotive weatherseal of Claim 5, wherein the powder coating is a thermoset material and the second polymeric material is a thermoplastic material.
10. A weatherseal comprising:

(a) a weatherseal body having a first portion formed of a first material and a second portion formed of a different second material; and
(b) a powder coating on the first portion and the second portion of the weatherseal body.

11. The weatherseal of Claim 10, wherein the powder coating includes a thermoset and a thermoplastic material.

12. The weatherseal of Claim 10, wherein the powder coating includes a thermoplastic material and the first portion is a thermoset material.

13. The weatherseal of Claim 10, further comprising a metallic-reinforcing member connected to the weatherseal body.

14. The weatherseal of Claim 10, wherein the first portion is a thermoset material, and the second portion is a thermoplastic material.

15. The weatherseal of Claim 10, wherein the powder coating is selected to form a colliquefied layer having a thickness less the 0.2 mm.

16. The weatherseal of Claim 10, further comprising a metallic-reinforcing member having a U-shaped cross sectional profile connected to the weatherseal body.

17. The weatherseal of Claim 10, wherein the powder coating is selected to form a contiguous colliquefaction.

18. The weatherseal of Claim 10, wherein the powder coating is located to form a sealing surface.

19. The weatherseal of Claim 10, wherein the powder coating is selected to form a colliquefaction having a gloss appearance.

20. A weatherseal for sealing an interface between two confronting surfaces in an automotive vehicle, the weatherseal comprising;

(a) a polymeric base formed of a first material;
(b) a resilient sealing portion for contacting one of the confronting surfaces, the resilient sealing portion formed of a different second material; and

(c) a heat fusible powder coating on at least a portion of the base and the resilient sealing portion.

Claim 21. Cancelled.

Claim 22. Cancelled.

23. The weatherseal of Claim 20, wherein the base includes a trim portion and the heat fusible powder coating is located on the trim portion.

24. The weatherseal of Claim 20, further comprising a metallic reinforcing member in the base.

Claim 25. Cancelled.

26. The weatherseal of Claim 20, wherein the base further comprises a trim portion formed of a different material than the sealing portion, and the heat fusible powder coating is on the trim portion.

Claim 27. Cancelled.

Claim 28. Cancelled.

Claim 29. Cancelled.

Claim 30. Cancelled.

Claim 31. Cancelled.

Claim 32. Cancelled.

33. The automotive weatherseal of Claim 1, wherein the trim portion is a thermoplastic material.

34. The automotive weatherseal of Claim 1, wherein the trim portion is a thermoset material.

35. An automotive weatherseal, comprising:

(a) a substrate having a first portion formed of a first polymeric material and a second portion formed of a different second polymeric material; and

(b) a heat fusible powder coating on the first portion and the second portion.

36. The automotive weatherseal of Claim 35, wherein one of the first portion and the second portion forms a trim portion of the weatherseal.

37. The automotive weatherseal of Claim 35, further comprising a metal reinforcing member connected to one of first portion and the second portion.

38. The automotive weatherseal of Claim 35, wherein the substrate has a U shaped cross section.

39. The automotive weatherseal of Claim 35, wherein the substrate includes a metal reinforcing member.

40. A weatherseal for an automotive vehicle, comprising:

- (a) a polymeric body;
- (b) a metal reinforcing member connected to the body, one of the body and the reinforcing member selected to engage the automotive vehicle; and
- (c) a powder coating on a portion of the reinforcing member and the polymeric body.

41. The weatherseal of Claim 40, wherein the polymeric body includes a trim portion.

42. A weatherseal comprising:

- (a) a weatherseal body having a first portion formed of a first material and a second portion formed of a different second material; and
- (b) a heat fusible powder coating on the first portion and the second portion of the weatherseal body.

43. The weatherseal of Claim 42, wherein the weatherseal body includes a trim portion.

44. A vehicle weatherseal, comprising:

- (a) a thermoplastic weatherseal body, and
- (b) a heat fusible powder coating on at least a portion of a surface of the thermoplastic weatherseal body.

45. The vehicular weatherseal of Claim 44, wherein the thermoplastic weatherseal body includes a sealing portion and trim portion, and the heat fusible power coating is on at least one of the sealing portion and the trim portion.

46. (Once Amended) The vehicular weatherseal of Claim 45, wherein one of the trim portion and the sealing portion has one of a foamed, cellular and sponge structure [a lower density than a remaining one of the trim portion and the sealing portion].

47. The vehicular weatherseal of Claim 44, further comprising a reinforcing member in the thermoplastic weatherseal body.

48. The vehicular weatherseal of Claim 47, wherein the reinforcing member is metal.

49. The vehicular weatherseal of Claim 44, wherein the heat fusible powder coating includes one of a thermoplastic and thermoset material.

50. A vehicle weatherseal, comprising:

- (a) a thermoplastic weatherseal body, and
- (b) a powder coating on at least a portion of a surface of the thermoplastic weatherseal body.

51. The vehicular weatherseal of Claim 50, wherein the thermoplastic weatherseal body includes a sealing portion and trim portion, and the heat fusible power coating is on at least one of the sealing portion and the trim portion.

52. (Once Amended) The vehicular weatherseal of Claim 51, wherein one of the trim portion and the sealing portion has one of a foamed, cellular and sponge structure [a lower density than a remaining one of the trim portion and the sealing portion].

53. The vehicular weatherseal of Claim 50, further comprising a reinforcing member in the thermoplastic weatherseal body.

54. The vehicular weatherseal of Claim 53, wherein the reinforcing member is metal.

55. The vehicular weatherseal of Claim 50, wherein the powder coating includes one of a thermoplastic and thermoset material.

56. A vehicular weatherseal, comprising:

- (a) a thermoset weatherseal body; and

(b) a heat fusible thermosetting powder coating on at least a portion of the thermoset weatherseal body.

57. The vehicular weatherseal of Claim 56, wherein the thermoset weatherseal body includes a sealing portion and trim portion, and the heat fusible power coating is on at least one of the sealing portion and the trim portion.

58. (Once Amended) The vehicular weatherseal of Claim 57, wherein one of the trim portion and the sealing portion has one of a foamed, cellular and sponge structure [a lower density than a remaining one of the trim portion and the sealing portion].

59. The vehicular weatherseal of Claim 58, further comprising a reinforcing member in the thermoset weatherseal body.

60. The vehicular weatherseal of Claim 59, wherein the reinforcing member is metal.

61. A vehicular weatherseal, comprising:

(a) a thermoset weatherseal body; and

(b) a thermosetting powder coating on at least a portion of the thermoset weatherseal body.

62. The vehicular weatherseal of Claim 61, wherein the thermoset weatherseal body includes a sealing portion and trim portion, and the thermosetting power coating is on at least one of the sealing portion and the trim portion.

63. (Once Amended) The vehicular weatherseal of Claim 62, wherein one of the trim portion and the sealing portion has one of a foamed, cellular and sponge structure [a lower density than a remaining one of the trim portion and the sealing portion].

64. The vehicular weatherseal of Claim 61, further comprising a reinforcing member in the thermoset weatherseal body.

65. The vehicular weatherseal of Claim 64, wherein the reinforcing member is metal.